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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,236	09/27/2000	Douglas R. Becker	07844-451001	7138
21876	7590	11/01/2004	EXAMINER	
FISH & RICHARDSON P.C. 3300 DAIN RAUSCHER PLAZA MINNEAPOLIS, MN 55402			THOMPSON, JAMES A	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/672,236

Applicant(s)

BECKER, DOUGLAS R.

Examiner

James A Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24 and 26 is/are rejected.
- 7) ☒ Claim(s) 1-23 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-23 and 25 are objected to because of the following informalities:

Claim 1, lines 7-8 should be modified from "interfering edge wherein shaping the trap polygon includes" to "interfering edge, wherein shaping the trap polygon includes:".

Claim 1, line 12 should be modified from "interfering edge, and" to "interfering edge; and".

Claim 2, lines 1-2 should be modified from "the color transition edge and" to "the color transition edge, and".

Claims 3-13 depend either directly or indirectly upon claim 1, and therefore incorporate all of the limitations of claim 1.

Claim 14, line 1 should be modified from "method of claim 1 wherein" to "method of claim 1, wherein".

Claim 15, line 1 should be modified from "method of claim 1 wherein" to "method of claim 1, wherein".

Claim 16, line 1 should be modified from "method of claim 1 wherein" to "method of claim 1, wherein".

Claim 17, line 1 should be modified from "method of claim 16 wherein" to "method of claim 16, wherein".

Claim 18, line 1 should be modified from "method of claim 1 wherein" to "method of claim 1, wherein".

Claim 19, lines 1-2 should be modified from "method of claim 1 wherein the step of determining movement equations includes" to "method of claim 1, wherein the step of determining movement equation includes:".

Claim 20, line 1 should be modified from "method of claim 19 wherein" to "method of claim 19, wherein".

Claim 21, line 1 should be modified from "method of claim 1 wherein" to "method of claim 1, wherein".

Claim 22, line 1 should be modified from "method of claim 21 wherein" to "method of claim 21, wherein".

Claim 23, line 6 should be modified from "interfering edge," to "interfering edge;".

Claim 25, lines 8-9 should be modified from "interfering edge wherein shaping the trap polygon includes" to "interfering edge, wherein shaping the trap polygon includes:".

Claim 25, line 13 should be modified from "interfering edge," to "interfering edge;".

Appropriate correction is required.

Allowable Subject Matter

2. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-23 and 25 are deemed to contain allowable subject matter. Claims 1-23 and 25 will be deemed allowable when the minor informalities listed above in item 1 have been corrected.

In view of the telephonic interview on 13 August 2004, the arguments submitted by Applicant regarding claims 1, 13 and 25 which were submitted on 19 August 2004, and the amendments to claims 1, 23 and 25 which were also submitted on 19 August 2004, claims 1, 23 and 25 are deemed to patentably distinguish over the prior art of record. Further, Examiner has not found any additional prior art with which to reject claims 1, 23 and/or 25. Claims 2-22 contain allowable subject matter since claims 2-22 are dependent, either directly or indirectly, upon claim 1 and thus contain all of the limitations therein.

Response to Arguments

3. Applicant's arguments regarding claims 24 and 26, see page 13, line 15 to page 14, line 20, filed 19 August 2004, have been fully considered but they are not persuasive.

Applicant's arguments regarding claims 24 and 26 are directed to the amendments made to claims 24 and 26 and not the claims as originally filed. New grounds of rejection are made below which are necessitated by the amendments to claims 24 and 26.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 24 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Yhann (US Patent 6,031,544) in view of Yamashita (US Patent 5,760,779).

Regarding claims 24 and 26: Yhann discloses a method of forming a trap polygon for trapping a color transition edge (column 6, lines 29-33 of Yhann). Said method comprises identifying an interfering edge which intersects a keep away zone (column 6, lines 40-46 of Yhann) defined by the color transition edge (column 6, lines 29-33 of Yhann).

Said method further comprises calculating a line (C_T) on which traps from the color transition edge and the interfering

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edge would optimally abut one another (column 6, lines 29-32 of Yhann).

Said method further comprises shaping a trap polygon using the line (column 6, lines 36-39 of Yhann).

Further regarding claim 26, Yhann discloses implementing the steps of a method of forming a trap polygon with a computer program which is physically embodied on a computer-readable medium (column 6, line 66 to column 7, line 4 of Yhann).

Yhann does not disclose expressly that said shaping is performed such that when the trap polygon corresponding to the interfering edge is subsequently formed, the trap polygon associated with the color transition edge does not have to be reshaped.

Yamashita discloses creating a surface mesh (figure 3 and figure 9 of Yamashita) by shaping a plurality of polygons (column 6, lines 34-37 of Yamashita). If the polygon is a quadrilateral (figure 2 of Yamashita) then the mesh is treated as an initial mesh (figure 5(444) and column 5, lines 61-64 of Yamashita). In a later step (figure 5(443) of Yamashita), triangles are used (figure 3 of Yamashita) to divide the quadrilaterals (column 5, line 65 to column 6, line 3 of Yamashita). Said quadrilaterals and triangles are not reshaped, however. The triangles simply divide the quadrilaterals (column 5, line 65 to column 6, line 1 of Yamashita), but the quadrilaterals themselves are not reshaped at their boundaries, as can further be seen in figures 2 and 3 of Yamashita. Further, after the triangles are formed, they are also not reshaped at their boundaries since the process simply increments to the next surface mesh after forming the triangles inside the

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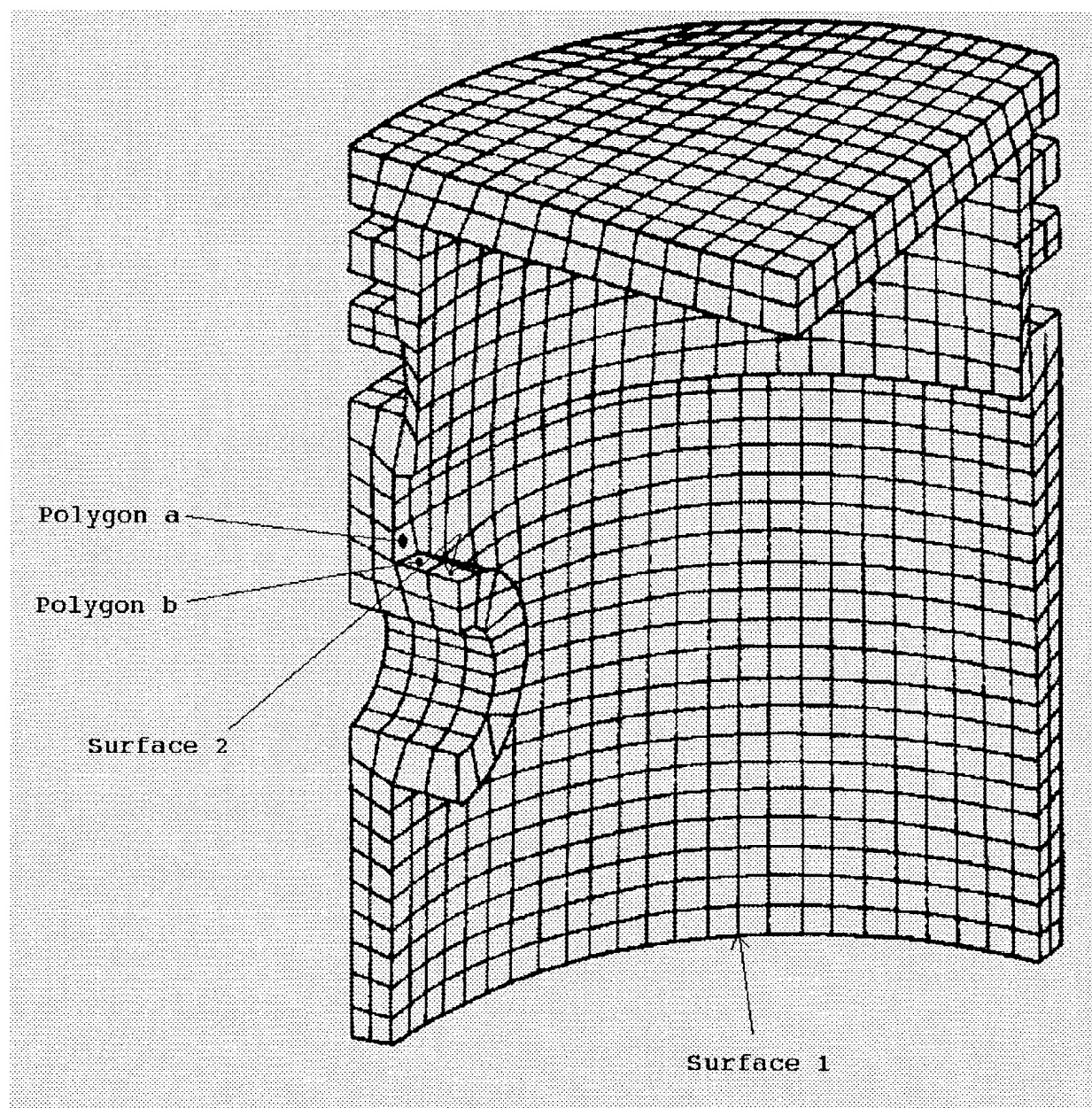
quadrilateral (figure 5(445) and column 6, lines 1-3 of Yamashita).

Said polygons are formed such that, when a polygon with an interfering edge is formed, the adjacent polygons do not need to be reshaped. For example, with reference to the figure on page 7 of the present action (derived from figure 2 of Yamashita), polygon "a" is a polygon that is formed on surface "1". Polygon "b" is a polygon formed on a small curved surface of the figure, surface "2". The edges of "a" and "b" interfere with one another since they must be matched both to the surface upon which they are meshed, and to each other since "a" and "b" partly join surfaces "1" and "2". Polygon "a" and "b" must not only be set to a size and shape such that they form surfaces "1" and "2" (respectively) at a size approximately the same as the other polygons, but they must be sized and shaped to coincide with each other. If "a" and "b" are formed only to conform with the size and shape of surfaces "1" and "2" (respectively) upon which they are meshed, they will interfere with each other since, for example, the edge of "b" can intersect the center of "a" if "a" is formed or extended further downward.

Yhann and Yamashita are combinable because they are from similar problem solving areas, namely the formation and shaping of polygon regions to form specific areas. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to shape a first polygon such that, when a second interfering polygon is formed, said first polygon does not need to be reshaped, as taught by Yamashita. Said first polygon corresponds to the trap polygon associated with the color transition edge taught by Yhann and said second polygon corresponds to the trap polygon with the interfering edge taught

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by Yhann. The motivation for doing so would have been to be able to generate a polygon representation of high precision (column 2, lines 45-52 of Yamashita). Therefore, it would have been obvious to combine Yamashita with Yhann to obtain the invention as specified in claims 24 and 26.



Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A Thompson whose telephone number is 703-305-6329. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson
Examiner
Art Unit 2624

JAT
20 October 2004



THOMAS D.
~~THOMAS~~ LEE
PRIMARY EXAMINER